

REMARKS

This responds to the Office Action mailed on June 17, 2004.

Claims 10, 11, 23, 32, and 35 are amended, no claims are canceled, and claims 38-40 are added; as a result, claims 1, 4-15, 17-25, and 32-40 are now pending in this application.

About the Claim Amendments

Applicant has made a number of claim amendments to correct typographical mistakes and to more clearly point out the invention. In particular, these amendments include:

Claim 11 and Claim 23: the occurrence of “a paraboloid, elastically deformable” was changed to “an elastically deformable, paraboloid”

Claim 11 and Claim 23: the occurrence of “the top surface” was changed to “the top surface of the circuit board”

Claim 32: the occurrence of “to transfer the second force to the integrated circuit package” was changed to “to transfer the second force to the circuit board”

Claim 35: the occurrence of “transfers the second force to the integrated circuit package” was changed to “transfers the second force to a circuit board”.

Support for these amendments can be found, among other places, in the Instant Application at Page 4, Lines 24 and 25.

Applicant has amended claim 10 to place it in independent form.

Double Patenting Rejection

Claims 1, 4, 6-8, 11, 17-21, 23-25, and 32-33 were rejected under a non-statutory double patenting rejection in view of U. S. Patent No. 6,657,131. A Terminal Disclaimer in compliance with 37 CFR 1.321(b)(iv) is enclosed herewith to overcome the rejection.

§102 Rejection of the Claims

Claims 1, 4, 5, 11, 23, and 32-37 were rejected under 35 USC § 102(b) as being anticipated by Bonnefoy (U.S. 4,611,869; herinafter referred to as Bonnefoy). Applicant

respectfully traverses this rejection because Bonnefoy does not anticipate the claimed invention, as set forth in claims 1, 4, 5, 11, 23, and 32-37.

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Dillon* 919 F.2d 688, 16 USPQ 2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, “[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*” *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added).

Applicant respectfully submits that the Office Action did not make out a *prima facie* case of anticipation because the reference does not teach each and every element of the rejected claims.

Regarding independent claim 1, the Office Action asserts that Bonnefoy teaches the claimed “simultaneously applying the first and second deforming forces to the first and second peripheries to engage the first apex with a surface of the integrated circuit package and the second apex with a surface of the circuit board.” (Emphasis added.) However, Applicant respectfully submits the Office Action has mischaracterized Bonnefoy. Bonnefoy teaches “[t]he clamping of connectors (11) against the areas (13) is made by means of device (10) comprising two clamping means in the form of clips (22,23) provided with force adjusting means for the clips...” (Emphasis added) Bonnefoy Column 4, Lines 11-17. Bonnefoy’s “areas (13)” are areas of connection or contact pads of a printed circuit card. See Bonnefoy Column 4, Lines 4-7 and Figure 2. In other words, Bonnefoy does not teach the claimed engaging “the first apex with a surface of the integrated circuit package,” but rather teaches clamping connectors to contact pads of a circuit card. Applicant cannot find, nor has the Office Action pointed to, any passage that teaches or suggests the claimed engaging “the first apex with a surface of the integrated circuit package.” As such, Applicant respectfully submits that Bonnefoy does not teach or suggest each and every element of independent claim 1.

Independent claims 11, 23, 32, and 35 include features similar to those discussed above regarding independent claim 1. Claims 4, 5, 33, 34, 36 and 37 each depend, directly or indirectly, on one of independent claims 1, 11, 23, 32, and 35.

For at least the reasons noted above, Applicant respectfully submits that Bonnefoy does not teach or suggest each and every element of claims 1, 4, 5, 11, 23, and 32-37.

§103 Rejection of the Claims

The Office Action has rejected claims 6-9, 12-15, 17-22, 24, and 25 as follows.

- Claims 6, 7, 12-15, 17-21, 24, and 25 were rejected under 35 USC § 103(a) as being unpatentable over Bonnefoy in view of Franken et al. (U.S. 5,770,891; herinafter referred to as Franken).
- Claim 8 was rejected under 35 USC § 103(a) as being unpatentable over Bonnefoy in view of Franken and in further view of Dozier, II et al. (U.S. 5,77,4251; herinafter referred to as Dozier).
- Claim 9 was rejected under 35 USC § 103(a) as being unpatentable over Bonnefoy in view of Kearney et al. (U.S. 6,616,327; herinafter referred to as Kearney).
- Claim 22 was rejected under 35 USC § 103(a) as being unpatentable over Bonnefoy in view of Pendse et al. (U.S. 5,528,462; herinafter referred to as Pendse).

Applicant respectfully traverses these rejections because the Office Action has not established a *prima facie* case of obviousness regarding claims 6-9, 12-15, 17-22, 24, and 25.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). To do that the Examiner must show that some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would lead an individual to combine the relevant teaching of the references. *Id.*

The *Fine* court stated that:

Obviousness is tested by "what the combined teaching of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413,

425, 208 USPQ 871, 878 (CCPA 1981)). But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." *ACS Hosp. Sys.*, 732 F.2d at 1577, 221 USPQ at 933. And "teachings of references can be combined *only* if there is some suggestion or incentive to do so." *Id.* (emphasis in original).

The M.P.E.P. adopts this line of reasoning, stating that

In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

Dependent claims 6, 7, 12-15, 17-21, 24, and 25 each depend, directly or indirectly, on one of independent independent claims 1, 11, 23, 32, and 35. As such, they each include features similar to "simultaneously applying the first and second deforming forces to the first and second peripheries to engage the first apex with a surface of the integrated circuit package and the second apex with a surface of the circuit board." As noted above, in the discussion of independent claim 1, Bonnefoy does not teach or suggest that feature. In order for the combination of Bonnefoy with any of Frankeny, Dozier, Kearny or Pendse to teach the cited feature, Frankeny, Dozier, Kearny or Pendse must teach what Bonnefoy is lacking. However, Applicant cannot find, and the Office Action does not point to, any passage in Frankeny, Dozier, Kearny or Pendse that teaches what Bonnefoy is lacking. As such, Applicant respectfully submits that the combination of Bonnefoy with any of Frankeny, Dozier, Kearny or Pendse does not teach or suggest each and every element of dependent claims 6, 7, 12-15, 17-21, 24, and 25.

Allowable Subject Matter

Claim 10 was objected to as being dependent upon rejected base claim 1, but was indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant appreciates the indication of allowance and has rewritten claim 10 to be in independent form. As noted above, claim 1 is also believed to be patentable for the reasons stated.

Reservation of Rights

Applicant does not admit that documents cited under 35 U.S.C. §§ 102(a), 102(e), 103/102(a), or 103/102(e) are prior art, and reserves the right to swear behind them at a later date. Arguments presented to distinguish such documents should not be construed as admissions that the documents are prior art.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 10/633,940

Filing Date: August 4, 2003

Title: I/C PACKAGE/THERMAL-SOLUTION RETENTION MECHANISM WITH SPRING EFFECT

Assignee: Intel Corporation

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Dkt: 884.355US2 (INTEL)

Conclusion

Based on the foregoing, Applicant respectfully requests that the rejections be withdrawn. Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612-371-2169) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 30 day of July, 2004.

KACIA LEE

Name

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Signature